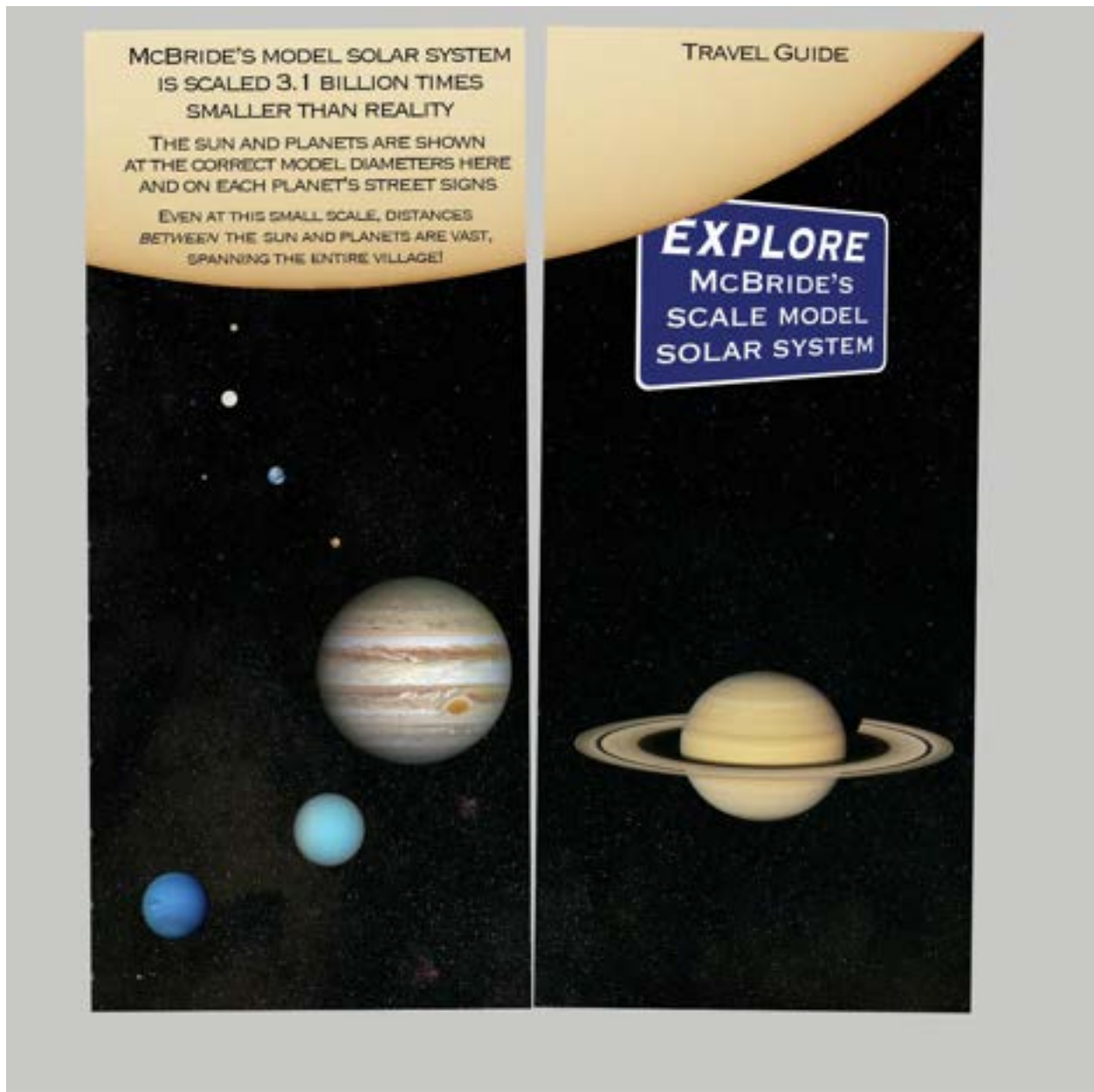


Solar System Brochure

Front/back:



Inside:

TOUR BETWEEN THE SUN AND NEPTUNE

FIND THE ORBITS ALONG MAIN STREET AND BRIDGE ROAD, MCBRIDE, A 3 KM ROUND TRIP
ROCKET PAST THE PLANETS AT ONE MILLION MILES PER STEP!

LOCATIONS OF ORBIT STREET SIGNS

OUT ON THE STREET

Yellow arrows on sidewalks show the location of model orbits and directions of planet motion.

The model sun is mounted on a lamp post at Main and First.

ORBIT OF SATURN

Street signs show model planet diameters.

We live in an extraordinary time. Spacecraft have visited every planet around our star, and even some asteroids and comets. Rockets travel over Mars, Venus, and a probe has shown lakes of hydrocarbons on a moon of Saturn, possibly over 10 years ago a stone human walked on another world - our moon!

Space travel and astronomy could be key if the sun, planets and moons were crowded together as seen in many illustrations. In reality, planets are so far apart that to show them on one page would make them much too small to see. To space them out correctly at the scale shown on the covers of this book you would require a page 2 km wide! So we laid out a two-dimensional model across the village of McBride with a street lamp as the sun. By traveling through this model, you can experience the "proportional" relative sizes and distances in our solar system.

I hope this journey enhances your enjoyment of the village as well as wonder of our planet and its distant neighbors. So it does for me when I am able to see the crescent Venus and my rings of Saturn through a telescope, or think of spacecraft being able to "travel" so far from Earth to show us alien worlds.

-Matthew Whelan, 2023

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MORE ABOUT THE REAL SOLAR SYSTEM

PROCESSES AND APPROXIMATIONS

Length of each planet's solar day and year is given in Earth time.

1X Sunlight compared to intensity at Earth's orbit.

7 Your weight on other worlds, if 100 lb on Earth.

+ Estimated temperature at surface (or in atmosphere).

+ Time for light to travel from Sun to each planet.

COMETS

Size: kilometers to tens of kilometers. When heated by the sun, a comet gives off gas and dust which may form a diffuse glowing coma or tail on a planet and a tail millions of km long. Orbits (usually very elliptical) move the outer solar system or far beyond, to the inner solar system. Periods of a few years to millions of years. Some hit the sun (only once!).

SEEING THE REAL SOLAR SYSTEM

By their nature, planets are always on the move. For information on where and when to find planets of our solar system, and more, see the link at you@mcbride.ca/solar

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Illustration credit: © NASA/JPL-Caltech, ESA, ESO, and the European Southern Observatory. Photo credit: NASA/JPL-Caltech, ESA, ESO, and the European Southern Observatory.

Planet	Day Length	Year Length	Weight (if 100 lb on Earth)	Temp (°C)	Light Time (min)
Mercury	176 days	88 days	9	430	3.3
Venus	243 days	225 days	9	460	6
Earth	24 hours	365.25 days	100	15	8.3
Earth's Moon	29.5 days	365.25 days	16.6	-130	1.3
Mars	24 hrs 40 mins	687 days	3.8	-63	12.6
Ceres	9 hours	4.6 years	7.5	-20	21
Jupiter	9.9 hours	11.9 years	2.3	-160	43.5
Saturn	10.7 hours	29 years	10.7	-180	1.2
Uranus	17 hours	84 years	9.1	-210	2.8
Neptune	16 hours	165 years	11.1	-210	8.1
Pluto	6 days	249 years	7	-230	5.2

Outside:

SOME FACTS ABOUT THE REAL SOLAR SYSTEM

THE SUN

Diameter: 1.4 million km
A star in the Orion arm of the Milky Way galaxy

MERCURY

Diameter: 4,879 km
58 million km from Sun
No moons

VENUS

Diameter: 12,104 km
108 million km from Sun
No moons

EARTH'S MOON & EARTH

Diameter: 12,756 km
150 million km from Sun
One moon

MARS

Diameter: 6,792 km
228 million km from Sun
Two moons

ASTEROIDS

Many small rocky bodies and dwarf planet Ceres (952 km)
Most are outside Mars' orbit

JUPITER

Diameter: 142,984 km
779 million km from Sun
95+ moons, faint ring system

SATURN

Diameter: 120,536 km
1.434 billion km from Sun
146+ moons, ring system

URANUS

Diameter: 51,118 km
2,873 million km from Sun
28 moons, faint ring system

NEPTUNE

Diameter: 49,528 km
4,495 million km from Sun
16 moons, six rings

PLUTOIDS

Pluto (2370 km), Eris, Makemake, Haumea and other dwarf planets in the Kuiper belt.

MCBRIDE'S MODEL SOLAR SYSTEM IS SCALED 3.1 BILLION TIMES SMALLER THAN REALITY

THE SUN AND PLANETS ARE SHOWN AT THE CORRECT MODEL DIAMETERS HERE, AND ON EACH PLANET'S STREET SIGNS.

EVEN AT THIS SMALL SCALE, DISTANCES BETWEEN THE SUN AND PLANETS ARE VAST, SPANNING THE ENTIRE VILLAGE!

TRAVEL GUIDE

EXPLORE
MCBRIDE'S
SCALE MODEL
SOLAR SYSTEM